

Green Accounting and Profitability of Oil and Gas Firms in Nigeria

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ABSTRACT

This study investigates the relationship between green accounting practices and the profitability of oil and gas firms in Nigeria. Specifically, it examines how audit size (AS), environmental audit reports (EAR), and environmental damage and litigation (EDL) influence earnings per share (EPS) as a measure of firm profitability. The study employs secondary data from the published financial and sustainability reports of selected oil and gas firms, with data analyzed using descriptive statistics, correlation, and regression analysis. The descriptive analysis reveals high variability in the data, with extreme values in EPS and environmental-related variables, indicating inconsistent performance and disclosure practices. Correlation results show not too strong relationships between green accounting variables and profitability, while regression analysis indicates that although the green accounting indicators have a positive influence on EPS, the effect is not statistically significant ($\text{Prob}(F\text{-statistic}) > 0.05$). The findings suggest that green accounting, in its current form within the Nigerian oil and gas sector, has not yet become a significant driver of profitability. This may be due to weak enforcement, inadequate integration of environmental policies into corporate strategies, or poor reporting standards. The study concludes by recommending stronger regulatory frameworks, improved environmental disclosure, capacity building, and the strategic alignment of sustainability initiatives with financial goals to enhance both environmental performance and firm profitability.

INTRODUCTION

The increasing awareness of environmental degradation and the adverse consequences of unsustainable industrial practices have prompted a global re-evaluation of corporate responsibility. For resource-dependent economies such as Nigeria, where oil and gas activities dominate the economic landscape, concerns about ecological damage have become particularly urgent. The oil and gas sector is a major contributor to environmental issues including air and water pollution, greenhouse gas emissions, and land degradation, necessitating the adoption of practices that integrate environmental accountability with financial performance (Hussain et al., 2021).

In response to these environmental concerns, green accounting—also known as environmental accounting—has emerged as a critical tool in aligning corporate profitability with ecological stewardship. Green accounting expands the traditional accounting framework to include the costs and consequences of environmental degradation, offering a more holistic picture of corporate performance (Palmer et al., 1995; Mastrandrea & Schneider, 2008). Specifically, it captures proxies such as Environmental Damage and Litigation (EDL), Audit Size (AS), and Environmental Audit Report (EAR), which reflect how environmental accountability measures influence corporate governance, transparency, and overall profitability.

In Nigeria, the adoption of green accounting practices remains limited but is gaining traction, particularly in sectors with significant environmental footprints like oil and gas. The increasing scrutiny from regulators, civil society, and international stakeholders has made environmental disclosure a crucial element of corporate reporting (Akinbami & Adegbulugbe, 1998). These disclosures not only enhance transparency but also serve as a mechanism for assessing a firm's commitment to sustainability. For instance, Environmental Audit Reports (EARs) provide stakeholders with structured insights into how firms are managing their environmental

responsibilities. Similarly, Audit Size (AS) is indicative of the resources allocated to ensuring compliance and credibility in environmental reporting (Berenger et al., 2020).

The variable Environmental Damage and Litigation (EDL) is especially relevant in the Nigerian oil and gas context. Frequent oil spills, gas flaring, and other environmentally harmful practices have led to increased litigation and reputational risks for firms operating in the Niger Delta and other oil-producing regions (Uwaegbulam, 2011). Lawsuits and regulatory penalties arising from environmental violations not only affect profitability but also reflect poorly on the sustainability profile of these firms. Therefore, incorporating EDL into green accounting metrics allows for a more accurate assessment of environmental costs and their implications for corporate earnings.

The relevance of green accounting in the oil and gas industry is also supported by Porter and van der Linde's (1995) theory, which posits that stringent environmental standards can foster innovation and cost savings, ultimately enhancing profitability. This idea challenges the traditional view that environmental responsibility imposes a financial burden on firms. Instead, by internalizing environmental costs and integrating sustainability into core operations, firms can unlock new efficiencies and maintain competitive advantage in a resource-constrained world (Shrivastava & Hart, 1995).

Moreover, as Mihaylova and Blumer (2022) emphasize, the broader economic impact of environmental degradation necessitates a paradigm shift in how profitability is measured. It is no longer sufficient for firms to report financial gains without accounting for their environmental footprints. In this regard, green accounting becomes not just a reporting tool but a strategic framework for sustainable corporate governance, particularly in environmentally sensitive industries like oil and gas.

Although the concept of green accounting is not new, its implementation in developing countries remains limited due to weak regulatory frameworks, lack of technical expertise, and limited enforcement (Panda, 2023). In Nigeria, despite efforts by agencies such as the National Environmental Standards and Regulations Enforcement Agency (NESREA), the enforcement of environmental standards remains inconsistent. This study aims to bridge the knowledge gap by evaluating how the integration of green accounting practices—measured through EDL, AS, and EAR—affects the profitability of oil and gas firms operating in Nigeria.

In light of these dynamics, this research is timely and significant. It offers insights into how oil and gas companies can navigate the complex terrain of environmental accountability and economic performance. By focusing on quantifiable and reportable environmental indicators, the study seeks to provide evidence-based recommendations that can inform both corporate strategies and public policy.

Therefore, this study investigates the impact of green accounting practices on the profitability of oil and gas firms in Nigeria. It explores whether firms that proactively manage and disclose their environmental impacts—particularly through mechanisms such as EAR, EDL, and AS—are better positioned to achieve sustainable profitability. In doing so, it contributes to the evolving discourse on corporate sustainability and offers practical implications for enhancing transparency, reducing environmental risk, and improving financial performance in Nigeria's vital oil and gas sector.

Problem Statement

The persistent environmental degradation associated with oil and gas operations in Nigeria presents a significant challenge to sustainable development and corporate profitability. As one of the country's most economically vital sectors, the oil and gas industry has been repeatedly criticized for its adverse environmental impacts, including pollution, habitat destruction, and greenhouse gas emissions (Uwaegbulam, 2011). These environmental consequences not only threaten public health and ecological balance but also carry legal, reputational, and financial risks that can undermine firm performance and long-term profitability.

Despite the growing global emphasis on sustainability and environmental accountability, Nigeria's oil and gas sector continues to underutilize tools such as green accounting that could foster transparency, improve environmental responsibility, and balance economic objectives with ecological protection. Green accounting,

through metrics such as Environmental Damage and Litigation (EDL), Audit Size (AS), and Environmental Audit Reports (EAR), provides a framework for companies to internalize environmental costs, assess ecological risks, and disclose relevant information to stakeholders. However, these practices remain weakly implemented or entirely absent in many Nigerian oil and gas firms, contributing to continued environmental harm and weak corporate governance (Berenger et al., 2020).

The lack of comprehensive Environmental Audit Reports (EARs) limits stakeholders' ability to evaluate a firm's environmental performance, which in turn diminishes investor confidence and weakens public trust. Furthermore, limited investment in robust environmental auditing mechanisms—reflected in insufficient Audit Size (AS)—hinders firms' ability to identify cost-saving opportunities or comply with international environmental standards (Mastrandrea & Schneider, 2008). Additionally, the frequent occurrence of Environmental Damage and Litigation (EDL), particularly in oil-producing regions like the Niger Delta, points to inadequate risk management frameworks and underscores the financial and legal consequences of environmental neglect (Uwaegbulam, 2011).

Moreover, in the absence of enforceable green accounting standards in Nigeria, most oil and gas firms fail to integrate environmental costs into their financial reporting systems, leading to distorted profitability metrics that ignore the long-term liabilities associated with ecological damage. As Mihaylova and Blumer (2022) argue, environmental costs must be reflected in financial statements for corporate performance to be accurately evaluated. Without this integration, companies may appear profitable in the short term while accumulating hidden environmental liabilities that compromise their sustainability and future earnings.

This gap between environmental accountability and profitability underscores the pressing need to examine how green accounting practices can influence financial outcomes in Nigeria's oil and gas sector. Despite evidence from developed economies that integrating environmental costs into decision-making can enhance both compliance and innovation (Porter & van der Linde, 1995), Nigerian firms have yet to fully embrace this approach. Shrivastava and Hart (1995) emphasize that industries with significant environmental impacts must embed ecological responsibility into corporate strategy to remain competitive and legitimate in a global sustainability-conscious market.

Given these challenges, this study seeks to evaluate the role of green accounting—measured through EDL, AS, and EAR—in influencing the profitability of oil and gas firms in Nigeria. By investigating how environmental responsibility and transparent reporting impact financial performance, the research aims to address a critical gap in knowledge and practice. Ultimately, this study aspires to offer insights that can support the development of stronger regulatory frameworks, guide corporate decision-making, and promote a more sustainable oil and gas industry that aligns economic goals with environmental stewardship.

Objectives of the Study

The primary objective of this study is to investigate the impact of green accounting on the profitability of oil and gas firms in Nigeria.

The specific objectives are to:

1. Examine the impact of Environmental Damage and Litigation (EDL), Audit Size (AS), and Environmental Audit Reports (EAR) on the Earnings per Share (EPS) of oil and gas firms in Nigeria.

LITERATURE REVIEW

Concept of Green Accounting

Green accounting, also known as environmental accounting, encompasses a variety of definitions but generally refers to identifying and reporting environment-specific costs (Nkwoji, 2021). It involves measuring an organization's performance in economic terms concerning environmental protection, with the primary aim of providing insights into how operational activities align with environmental sustainability. Unlike conventional

accounting, which focuses solely on financial information for shareholders and bondholders, green accounting expands performance measures to include environmental impacts, demonstrating an organization's responsibility toward stakeholders (Astuti, 2012).

The objectives of green accounting include promoting sustainable development, fostering positive relationships with the community, and facilitating efficient environmental conservation efforts. It helps companies identify the costs of environmental conservation within their regular business operations, assess the benefits of these activities, and quantify them in monetary or physical terms for better communication of results.

Green accounting integrates environmental costs into financial operations and evaluates the economic and ecological impacts of changes to products and processes (Rewadikar, 2014). As a relatively new approach, it seeks to account for the costs associated with utilizing natural resources—such as land, water, and air—as inputs in production and as waste repositories (Virola, De Perio & Angeles, 2000).

By incorporating principles of environmental management and conservation into reporting and cost-benefit analyses, green accounting allows businesses to assess the impact of sustainable practices. It provides stakeholders with economic insights, enabling informed decision-making that complies with environmental regulations while contributing to the organization's profitability (Rewadikar, 2014).

Sustainability

Sustainability is a multidimensional concept encompassing environmental, social, and economic aspects. It is broadly defined as meeting present needs without compromising the ability of future generations to meet their own needs (Brundtland Commission, 1987). Over the years, various scholars have contributed to the conceptualization of sustainability, offering diverse perspectives and frameworks to guide sustainable practices. The concept of sustainability has evolved over time, shaped by various theoretical and empirical contributions. One key framework is the Triple Bottom Line (TBL) Approach, introduced by Elkington (1997), which posits that sustainability should balance economic, environmental, and social performance. This approach emphasizes corporate responsibility beyond financial gains.

Another significant framework is the Ecological Modernization Theory, proposed by Mol and Sonnenfeld (2000), which suggests that sustainability can be achieved through technological innovation, policy reform, and industry adaptation, thereby demonstrating that economic development and environmental protection can coexist. The United Nations (2015) established the Sustainable Development Goals (SDGs), consisting of 17 global objectives aimed at addressing sustainability challenges, including poverty, inequality, climate action, and economic growth. Additionally, Pearce et al. (1993) distinguish between weak sustainability, which assumes that natural and human capital are interchangeable, and strong sustainability, which argues that natural resources have no perfect substitutes and must be preserved.

Sustainability is broadly categorized into three major dimensions: environmental, economic, and social sustainability. Environmental Sustainability focuses on the responsible use of natural resources and the reduction of environmental degradation (Fiksel, 2006). This includes strategies such as renewable energy adoption, conservation policies, and sustainable waste management. Economic Sustainability emphasizes the need for long-term financial viability while integrating sustainable practices into business operations. Porter and Kramer (2011) introduced the concept of shared value, which highlights the role of businesses in creating economic benefits while addressing societal challenges. Social Sustainability encompasses ethical business practices, social equity, and community well-being. Carroll (1991) introduced the concept of Corporate Social Responsibility (CSR), which promotes responsible business conduct in support of societal welfare.

Despite widespread recognition of sustainability, several barriers hinder its effective implementation. Policy and Governance Issues pose significant challenges, as weak regulatory frameworks and enforcement mechanisms limit sustainability efforts (Jordan & Lenschow, 2010). Economic Barriers also create obstacles, as businesses often face conflicts between short-term profit motives and long-term sustainability goals (Bansal & DesJardine, 2014). Technological Constraints further complicate sustainability efforts. Norton (2005) notes that the high cost and slow adoption of sustainable technologies hinder progress.

Public Perception and Resistance can also impede sustainability initiatives. Many stakeholders resist change due to misinformation, cultural norms, or lack of incentives (Pretty, 2008). Recent studies have expanded the discourse on sustainability to include emerging trends that enhance sustainable practices. Green Innovation and Digitalization have gained traction, with advances in artificial intelligence, big data, and blockchain technology being leveraged to support sustainability efforts (Geissdoerfer et al., 2017).

The Effect of Green Accounting on Profitability

Green accounting refers to the process of recognizing, measuring, recording, summarizing, reporting, and disclosing information about the economic, social, and environmental impacts of corporate activities on society, the environment, and the corporation itself. This is presented as an integrated accounting information package designed to assist users in making both economic and non-economic decisions (Lako, 2018).

According to research by Chasbiandani et al. (2019), implementing robust environmental or green accounting practices significantly affects investors' and consumers' perceptions of a company. A trustworthy reputation among consumers enhances the company's image, which in turn contributes to increased profitability.

Furthermore, Budiono and Dura (2021) highlight that green accounting serves as a strategic approach for companies to improve environmental performance, manage costs effectively, invest in eco-friendly technologies, and promote sustainable products. This approach enables businesses to manage environmental expenses better, adopt environmentally conscious strategies, achieve more accurate production cost calculations, and identify opportunities to minimize environmental costs. Ultimately, these efforts contribute to enhanced profitability while supporting sustainable development goals.

Community Development Cost

Community development cost is cost involved in community mobilization. This applies to the way in which people can be encouraged and motivated to participate in programme activities. In order to mobilize a community successfully, it is important to identify where people's priorities lie and what it is that motivates them (Amahalu, Okoye & Obi, 2018).

Employee Health and Safety Cost

Employee Health and Safety Cost is a great way for employees to learn additional skills and knowledge and to reinforce quality work practices which will result in a change in workplace behaviour. Investing in effective employee training will increase skills, knowledge, productivity and morale as well as replace and avoid workplace incidents (Okudo, Amahalu, Obi, & Okafor, 2022; Naquin, 2015). Health and safety as a function focuses on securing and promoting safety and health of the persons working for the company including both physical and mental health. Like most other management function this includes developing and implementing health and safety strategies, measuring and following up on performance issues and report these issues to internal and external stakeholders (Okudo & Ndubuisi, 2021).

Profitability

Profitability is the state or condition of yielding a financial profit or gain. Profitability is the ability of a business to earn a profit (Ndulue, Okoye & Amahalu, 2021). A profit is what is left of the revenue a business generates after it pays all expenses directly related to the generation of the revenue, such as producing a product, and other expenses related to the conduct of the business activities Hofstrand (2018). Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run (Amahalu, Ezenwaka, Obi & Okudo, 2022).

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Public Perception and Resistance can also impede sustainability initiatives. Many stakeholders resist change due to misinformation, cultural norms, or lack of incentives (Pretty, 2008). Recent studies have expanded the discourse on sustainability to include emerging trends that enhance sustainable practices. Green Innovation and Digitalization have gained traction, with advances in artificial intelligence, big data, and blockchain technology being leveraged to support sustainability efforts (Geissdoerfer et al., 2017). Climate Finance is another growing area, focusing on the role of green bonds and sustainable investment strategies in financing sustainability projects (IEA, 2020). Behavioral Economics and Sustainability explore consumer choices and decision-making processes that influence sustainability practices (Newman & Kenworthy, 1999).

Environmental Damage and Litigation

Environmental damage, including oil spills, gas flaring, water contamination, and deforestation, has far-reaching financial implications for oil and gas companies. These damages often result in costly legal battles, regulatory fines, compensation to affected communities, and reputational losses—all of which can erode a firm's profitability and reduce EPS (Uwaegbulam, 2011). For example, firms operating in the Niger Delta region of Nigeria have faced frequent litigation due to environmental degradation, which has led to substantial legal liabilities and loss of investor confidence (Berenger et al., 2020).

Litigation costs associated with environmental negligence are often substantial and unpredictable. These costs can directly reduce net income, thereby negatively affecting the EPS. Furthermore, companies that repeatedly face environmental lawsuits may experience lower stock prices and market devaluation. As such, EDL is not just an environmental concern but a critical financial variable with implications for investor return (Mastrandrea & Schneider, 2008).

Audit Size (AS)

Audit Size (AS) refers to the magnitude and capacity of the audit function, particularly in terms of the audit firm's reputation, staff strength, and resources devoted to comprehensive financial and environmental audits. Larger audit firms or those with environmental audit expertise are more likely to identify inefficiencies, environmental liabilities, and compliance issues, which can lead to strategic improvements that enhance profitability (Palmer et al., 1995).

A robust audit system increases the reliability of financial reporting and enhances stakeholder confidence. Firms that engage reputable auditors are perceived as being more transparent and accountable, which can attract more investors and positively influence stock performance and EPS. Moreover, larger audits often include environmental assessments that guide firms in reducing waste, improving resource use, and complying with environmental regulations—leading to cost savings and enhanced financial performance (Porter & van der Linde, 1995).

Environmental Audit Reports

Environmental Audit Reports (EARs) provide systematic evaluations of a company's adherence to environmental laws, standards, and best practices. These reports enable firms to track their environmental performance, identify areas for improvement, and set targets for sustainable operations. Transparent and timely reporting of environmental audits not only enhances a firm's reputation but also builds trust with investors, regulators, and the public (Shrivastava & Hart, 1995). From a profitability standpoint, EARs can lead to improved internal control over environmental costs, better compliance with environmental regulations, and strategic planning that avoids penalties or operational disruptions. Firms that consistently publish EARs are likely to attract environmentally conscious investors and customers, which may translate into higher revenue streams and, ultimately, improved EPS (Mihaylova & Blumer, 2022).

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Earnings per Share

Earnings per Share (EPS) is a vital financial metric that reflects a company's profitability on a per-share basis. It is calculated by dividing the net income available to ordinary shareholders by the weighted average number of outstanding shares during a specific period. EPS is widely used by investors, analysts, and stakeholders to assess a company's financial health, performance trends, and potential for growth. A higher EPS indicates better profitability and stronger financial performance, often influencing investment decisions and stock valuation in the capital market.

In the context of this study, EPS is used as a proxy for profitability in oil and gas firms operating in Nigeria. The choice of EPS is strategic, as it captures the firm's bottom-line performance after accounting for all expenses, taxes, and interest, providing a clear picture of the value being created for shareholders. Moreover, EPS is sensitive to both operational efficiency and strategic financial decisions, including those related to environmental practices and sustainability reporting.

The analysis reveals that EPS in the sampled oil and gas firms exhibits significant variability, with a wide range between the minimum and maximum values. This suggests inconsistencies in profitability across firms and over time, possibly influenced by external economic factors, environmental liabilities, and internal corporate governance. The skewness and high standard deviation of EPS further indicate the presence of outliers and uneven distribution, which may be attributed to fluctuations in global oil prices, regulatory pressures, or differences in how firms manage and report environmental issues.

THEORETICAL REVIEWS

Legitimacy Theory

Green accounting, as viewed through the lens of legitimacy theory, emphasizes the implicit social contract between institutions and society. This theory underscores the need for organizations to align their operations with societal norms and expectations to maintain congruence with the broader community. Companies are obligated to adapt to societal and environmental demands to uphold their legitimacy (Erlangga et al., 2021).

The connection between legitimacy theory and green accounting lies in the recognition that businesses act in the interest of diverse stakeholders. Stakeholder theory extends this perspective by highlighting the interplay between companies and their stakeholders—including creditors, governments, communities, consumers, analysts, and others. It asserts that organizations must consider the environmental and social impacts of their business activities, reflecting a commitment to environmental stewardship (Cho & Patten, 2013).

Financial performance remains a critical metric for businesses, directly tied to performance evaluation and measurement. It reflects a company's efficiency and effectiveness in its operations over a given accounting period. Stakeholder theory connects financial performance with corporate social responsibility, emphasizing that companies must balance profitability with their obligations to society and the environment.

Stakeholders' theory

In an organization, stakeholders are broadly categorized into two groups: internal and external. Internal stakeholders typically include management, employees, and the board, while external stakeholders consist of shareholders, communities, creditors, customers, government agencies, and the environment (Johnson-Rokosu & Olanrewaju, 2016). Stakeholder theory posits that a firm's success hinges on effectively managing its relationships with all its stakeholders (Uwuigbe & Jimoh, 2012).

This theory emphasizes the role of social information disclosure in fostering interactions between organizations, governments, individuals, associations, and society at large (Magnaghi & Aprile, 2014). Gray et al. (2002) further assert that, from an organizational perspective, stakeholder theory operates on a model of accountability that encompasses normative, descriptive, and explanatory elements. It underscores the responsibilities of companies and the need for transparency in their activities, particularly in the context of corporate social responsibility (CSR).

A key factor in managing stakeholder relationships is the strategic use of information—whether financial, sustainability-related, or both—to secure stakeholder support and approval for corporate strategies while minimizing objections. Stakeholder theory, alongside legitimacy theory, justifies voluntary disclosure as an effective tool for fostering and maintaining relationships between the company and its diverse interest-bearing groups. Stakeholder theory also provides a theoretical framework for understanding the interaction between stakeholders and management, offering insights into corporate social disclosures and sustainability or environmental reporting in annual corporate reports.

The growth of voluntary environmental guidelines and policies can be attributed to three main reasons. First, it reflects a genuine acknowledgment by industries of their duty to the environment. Second, it addresses pressures from shareholders, customers, interest groups, and communities for greater transparency and accountability in environmental management, thereby enhancing public relations and demonstrating environmental responsibility. Third, companies adopt cooperative and flexible approaches to environmental regulation to avoid prescriptive

and expensive command-and-control mechanisms.

Empirical Reviews

Amahalu, Ezechukwu, and Obi (2017) examined the relationship between corporate social responsibility (CSR) and the financial performance of quoted deposit money banks in Nigeria between 2010 and 2016. The study specifically focused on the extent of the relationship between donations and return on assets, donations and return on equity, and donations and the market-to-book value of these banks. An ex-post facto research design was adopted, with a sample size comprising all fifteen quoted deposit money banks in Nigeria. Analytical methods, including Pearson Coefficient Correlation, Panel Least Square (PLS) regression analysis, and Granger Causality test, were applied using E-View 9.0 software. The findings revealed a significant positive relationship between donations and return on assets, return on equity, and market-to-book value at a 5% level of significance. These results suggest that engaging in CSR enhances future returns for deposit money banks in Nigeria. The study recommended that banks should actively participate in CSR initiatives, as this not only fosters a safer operational environment but also contributes to the maximization of shareholder wealth.

Agbo, Ohaegbu, and Akubilo (2017) analyzed the impact of environmental costs on the organizational performance of Nigerian Brewery Plc. The study utilized data from the company's annual reports, focusing on Donations (DN), Medical Expenses (ME), and Return on Assets (ROA) for the period 2011 to 2015. Hypotheses were tested using multiple regression analysis. The findings indicated a negative relationship between donations and ROA ($r = -0.068$) and between medical expenses and ROA ($r = -0.072$). However, Trainings, Recruitment, and Canteen Expenses (TRC) showed a positive correlation with ROA ($r = 0.068$) in Nigerian Brewery Plc.

Similarly, Okafor (2018) examined the influence of environmental costs on firm performance. Using financial reports from Oil and Gas Companies listed on the Nigerian Stock Exchange between 2006 and 2015, the study employed regression analysis through the Statistical Package for Social Sciences (SPSS). The results revealed that improved environmental performance positively affects an organization's business value. Furthermore, the study highlighted that environmental accounting enables firms to reduce environmental and social costs while enhancing their overall performance.

Nwaiwu and Oluka (2018) investigated the impact of environmental cost disclosure on the financial performance of quoted oil and gas companies in Nigeria. The study utilized time series data obtained from annual financial reports and the Central Bank of Nigeria's economic review. Pearson product-moment correlation and multiple linear regression analysis were applied using SPSS version 22. The results revealed that adequate disclosure of environmental costs and compliance with corporate environmental regulations have a significant positive effect on financial performance metrics. The study recommended the enforcement of regulations to ensure proper environmental cost disclosure and reporting. Additionally, it advised oil and gas companies to implement a comprehensive environmental costing system to foster a conflict-free corporate environment and enhance overall corporate performance.

A study by Bamidele and Nwachukwu (2022) examined the role of environmental sustainability reporting (a component of green accounting) in enhancing profitability metrics such as EPS. The study covered 8 Nigerian oil companies from 2014 to 2021, using a combination of content analysis of sustainability reports and financial statement analysis. Regression models were applied to determine the relationship between the quality and extent of sustainability disclosures and the financial performance indicators. The study found that oil companies that provided detailed and transparent environmental reports saw significant improvements in their financial performance. These companies were able to build trust with investors, attract new capital, and enhance asset management, leading to higher returns on capital and assets.

METHODOLOGY

Introduction

This section provides a full explanation of the research design, population, sample size, and sampling methodologies, as well as the data collection and analysis methods. Furthermore, it explains the reasoning behind these methodological choices and justifies their relevance in the context of this study.

Research Design

The research design adopted for this study was ex-post facto research design which is a quantitative research approach. This design is suitable for the purpose of this research because it is not possible to directly manipulate or control any of the independent variables. The purpose of this design is to obtain answers to the research questions raised in this work and investigate the Impact of Green Accounting on Profitability of oil and gas firms in Nigeria.

Population, Sample Size and Sampling Techniques

The population for this study consisted of all the seven (7) oil and gas companies listed on the Nigeria Exchange Group (NGX) which is also chosen as the sample size. These companies play vital roles in the country's economic landscape, influencing financial stability, economic growth, and overall prosperity through their activities. The choice to include all nine oil and gas companies listed on the Nigerian Exchange Group (NGX) as the sample for this study reflects their central role in Nigeria's economic and environmental landscape. These companies significantly impact the country's financial stability and growth, making them representative of the broader sector. Including the entire population ensures comprehensive insights into the sector's Green Accounting practices, thus providing accurate, relevant data for evaluating the impact on profitability and sustainability. This approach enhances the study's reliability by capturing the full spectrum of practices within Nigeria's publicly traded oil and gas industry.

Sources of Data Collection

This study adopts a secondary data approach to investigate the impact of green accounting on the profitability of oil and gas firms in Nigeria. Specifically, data will be sourced from the published annual reports of oil and gas companies listed on the Nigerian Exchange Group (NGX) for the period 2014 to 2023.

The annual reports serve as comprehensive documents detailing each company's financial performance, sustainability initiatives, environmental disclosures, and climate-related expenditures. These reports also reflect the implementation of green accounting practices and climate finance strategies by key stakeholders such as executive management, sustainability officers, environmental compliance units, and finance departments.

For the purpose of this study, relevant variables will be extracted from these reports, including:

- a. **Earnings Per Share (EPS)** – as the main profitability indicator,
- b. **Environmental Damage and Litigation (EDL)** – derived from notes on provisions, legal risks, and contingent liabilities,
- c. **Audit Size (AS)** – measured using audit firm size or audit-related expenses,
- d. **Environmental Audit Reports (EAR)** – based on the presence and quality of third-party environmental audits and sustainability disclosures.

Model Specification

In line with the study's objective of assessing the impact of green accounting on the profitability of oil and gas firms in Nigeria, the model is specified based on the functional relationship:

$$\text{Profitability} = f(\text{Green Accounting}) \dots\dots\dots(1)$$

Profitability is proxied by **Earnings Per Share (EPS)**, while green accounting is represented through various disclosures and costs, including:

The econometric model is therefore specified as:

$$\text{EPS}_{it} = \beta_0 + \beta_1 \text{EDL}_{it} + \beta_2 \text{AS}_{it} + \beta_3 \text{EAR}_{it} + \varepsilon_{it} \dots\dots\dots(2)$$

Where:

- i. EPS_{it} = Earnings per Share of firm i in period t
- ii. EDL_{it} = Environmental Damage and Litigation costs or provisions
- iii. AS_{it} = Audit Size (measured by audit firm type or audit fees)
- iv. EAR_{it} = Environmental Audit Report (disclosure score or binary indicator)
- v. β_0 = Intercept term
- vi. $\beta_1 \dots \beta_5$ = Coefficients for explanatory variables
- vii. ϵ_{it} = Error term

This model will be estimated using panel data regression techniques to account for firm-specific and time-specific variations over the study period (2014–2023).

Method of Data Analysis

The study employs secondary panel data analysis using EViews 10. Data from the annual reports of selected Nigerian oil and gas firms (2014–2023) will be analyzed.

Descriptive statistics and correlation analysis will be used to understand variable trends and relationships. The Hausman test will determine the suitability of either a Fixed Effects Model (FEM). The main regression model will examine the effect of Environmental Damage and Litigation (EDL), Audit Size (AS), and Environmental Audit Report (EAR) on Earnings per Share (EPS). Significance will be tested at the 5% level.

Data Presentation

Descriptive Statistics

	EPS	AS	EAR	EDL
Mean	37.1151	0.78571	34413.26	87217.76
Median	8.255	1	19386	3735.667
Maximum	831	1	362340	1500000
Minimum	-2076	0	11	0
Std. Dev.	337.034	0.40443	62458.47	294997.1
Skewness	-3.4715	-1.3916	3.815995	3.878461
Kurtosis	24.1711	3.00232	17.89076	17.16061
Jarque-Bera	1447.89	22.5935	816.6138	760.3535
Probability	0.0000	1.2E-05	0.0000	0.0000
bservations	70	70	70	70

The descriptive statistics provide a summary of the key variables used in the analysis: Earnings Per Share (EPS), Audit Size (AS), Environmental Audit Report (EAR), and Environmental Damage and Litigation (EDL) across 70 observations. These statistics help to understand the central tendency, dispersion, and distribution characteristics of each variable.

The average Earnings Per Share (EPS) among the sampled oil and gas firms is ₦37.12, suggesting that on

average, firms are profitable. However, the median EPS is considerably lower at ₦8.26, indicating the presence of outliers or extreme values in the dataset. The minimum and maximum EPS values range from –₦2,076 to ₦831, reflecting significant variability in profitability among the firms, with some recording substantial losses. The distribution of EPS is negatively skewed (–3.47) and leptokurtic with a kurtosis value of 24.17, which implies that the data are highly peaked with heavy tails. The Jarque-Bera (JB) statistic confirms the non-normality of the distribution with a probability value of 0.0000.

Audit Size (AS), a binary variable coded as 1 for large audit firms and 0 for smaller firms, has a mean value of 0.79. This indicates that a majority of the sampled firms engage large audit firms, which could be attributed to the complexity and regulatory requirements of the oil and gas sector. The distribution is negatively skewed (–1.39), with a kurtosis of 3.00, which is close to the normal distribution benchmark. However, the Jarque-Bera probability of 0.000012 still indicates some deviation from normality.

The average value of the Environmental Audit Report (EAR) is ₦34,413.26, with a median of ₦19,386, suggesting moderate spending on environmental audits by the firms. However, the high standard deviation of ₦62,458.47 and a maximum value of ₦362,340 reveal substantial variation in the extent of environmental audit practices. The data for EAR are positively skewed (3.82) and highly leptokurtic (17.89), signifying the presence of extreme values or outliers. The Jarque-Bera statistic ($p = 0.0000$) confirms that the distribution is not normal.

Similarly, Environmental Damage and Litigation (EDL) has a mean value of ₦87,217.76, but the median value is much lower at ₦3,735.67. This large discrepancy, along with a minimum value of 0 and a maximum of ₦1.5 million, highlights a wide variation in reported environmental liabilities and litigations among the firms. The standard deviation is extremely high at ₦294,997.10, confirming the dispersion in EDL values. Like EAR, the EDL variable is positively skewed (3.88) and leptokurtic (17.16), indicating non-normality and the presence of high outliers, which is also statistically supported by the Jarque-Bera test ($p = 0.0000$).

In summary, the descriptive statistics reveal that most of the variables are characterized by significant skewness and high kurtosis, indicating the presence of outliers and a non-normal distribution. These properties may affect the reliability of regression analysis and suggest the potential need for data transformation techniques such as log transformation or winsorization to normalize the data and improve model performance.

Correlation Analysis

	EPS	AS	EAR	EDL
EPS	1.0000	-0.1037	0.0112	0.2026
AS	-0.1037	1.0000	0.1659	-0.1093
EAR	0.0112	0.1659	1.0000	-0.0533
EDL	0.2026	-0.1093	-0.0533	1.0000

The correlation matrix provides insights into the linear relationships among the key variables in the study: Earnings Per Share (EPS), Audit Size (AS), Environmental Audit Report (EAR), and Environmental Damage and Litigation (EDL).

From the results, EPS has a weak negative correlation with Audit Size (AS) ($r = -0.1037$), suggesting that firms audited by larger audit firms tend to have slightly lower earnings per share, although the relationship is very weak and likely not statistically significant. EPS shows a very weak positive correlation with Environmental Audit Report (EAR) ($r = 0.0112$), indicating an almost negligible linear relationship between firms' environmental audit efforts and profitability.

Interestingly, EPS shows a weak positive correlation with Environmental Damage and Litigation (EDL) ($r =$

0.2026). This could imply that firms incurring environmental damages or facing litigations might still maintain some level of profitability, possibly due to their size or operational scale that absorbs such costs. However, this relationship should be interpreted with caution, as it does not imply causation.

Among the independent variables, AS and EAR are weakly and positively correlated ($r = 0.1659$), suggesting that larger audit firms may be associated with firms that invest more in environmental auditing. AS and EDL, however, show a weak negative correlation ($r = -0.1093$), implying that firms audited by larger auditors might be slightly less prone to environmental damages and litigations. The correlation between EAR and EDL is negative but very weak ($r = -0.0533$), indicating a minimal inverse relationship between audit reporting and environmental infractions.

Fixed Effects Regression Results

The fixed effects regression model is employed to test the relationship Green Accounting and Profitability of Oil and Gas Firms in Nigeria. The results of the regression analysis are presented in the following table:

Dependent Variable: EPS				
Method: Panel Least Squares				
Date: 07/23/25 Time: 08:20				
Sample: 2014 2023				
Periods included: 10				
Cross-sections included: 7				
Total panel (balanced) observations: 70				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AS	2.228450	182.5963	0.012204	0.9903
EAR	0.000887	0.000729	1.217633	0.2281
EDL	9.49E-05	0.000191	0.495940	0.6217
C	-3.451687	154.7007	-0.022312	0.9823
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.133906	Mean dependent var		37.11514
Adjusted R-squared	0.003991	S.D. dependent var		337.0339
S.E. of regression	336.3606	Akaike info criterion		14.60581
Sum squared resid	6788308.	Schwarz criterion		14.92702
Log likelihood	-501.2033	Hannan-Quinn criter.		14.73340
F-statistic	1.030724	Durbin-Watson stat		1.467160
Prob(F-statistic)	0.426677			

The fixed-effects regression results, presented in Table 4.3, examine the influence of three green accounting indicators—Audit Size (AS), Environmental Audit Report (EAR), and Environmental Damage and Litigation (EDL)—on Earnings Per Share (EPS) of Nigerian oil and gas firms over the period 2014–2023. The model controls for unobserved, time-invariant firm characteristics by including cross-section fixed effects.

Audit Size (AS) carries a positive coefficient of 2.228 but is far from statistically significant ($t = 0.012$; $p = 0.990$). This suggests that, in this sample, engaging larger audit firms does not translate into higher EPS. This finding contrasts with Amahalu, Ezechukwu, and Obi (2017), who documented that stronger CSR disclosure—analogue here to rigorous audit oversight—positively affects bank performance. The insignificance of AS may reflect the oil and gas sector's entrenched reporting practices, where audit size alone is insufficient to drive profitability.

Environmental Audit Report (EAR) has a positive coefficient of 0.000887 ($t = 1.218$; $p = 0.228$). Although the sign is consistent with Okafor (2018) and Nwaiwu and Oluka (2018), who found that transparent environmental disclosures enhance firm value, the relationship does not reach conventional significance levels. It is possible that the breadth and depth of EAR disclosures vary considerably across firms, diluting any uniform impact on EPS.

Environmental Damage and Litigation (EDL) also exhibits a positive but statistically insignificant coefficient of 0.0000949 ($t = 0.496$; $p = 0.622$). While Bamidele and Nwachukwu (2022) argued that proactive environmental management reduces liability and improves returns, our results suggest that, for Nigerian oil and gas firms, litigation provisions and environmental damages have no clear direct effect on per-share earnings. This may reflect the ability of large firms to absorb litigation costs without meaningfully altering profitability metrics.

Overall, the model explains only 13.4% of the variation in EPS ($R^2 = 0.1339$; Adjusted $R^2 \approx 0.004$), and the F-statistic (1.031; $p = 0.427$) indicates that the set of green accounting variables, as a group, does not significantly predict EPS at the 5% level. The Durbin–Watson statistic of 1.467 suggests mild positive serial correlation, which may warrant further robustness checks. These findings imply that while green accounting practices are theoretically linked to financial performance, their measurable impact on EPS in the Nigerian oil and gas context remains weak. Future research might explore additional mediating factors—such as regulatory enforcement intensity or firm governance quality—to better capture the profitability effects of environmental accountability.

Summary of the Findings

This study investigated the relationship between green accounting practices and the profitability of oil and gas firms in Nigeria from 2014 to 2023. Using Earnings Per Share (EPS) as a proxy for financial performance, the research examined the effect of Audit Size (AS), Environmental Audit Report (EAR), and Environmental Damage and Litigation (EDL) as key green accounting indicators.

The descriptive statistics revealed that EPS data exhibited wide variability with extreme values, indicating inconsistency in firm performance across the years. Similarly, the green accounting variables displayed significant dispersion and skewness, particularly EDL, suggesting the uneven nature of environmental costs and legal issues in the industry.

The correlation analysis showed weak relationships between EPS and the independent variables, with the highest correlation observed between EPS and EDL ($r = 0.2026$), implying a slight positive association.

The regression results indicated that all three green accounting variables (AS, EAR, and EDL) had positive but statistically insignificant effects on EPS. The R-squared value of approximately 13.4% suggested that only a small portion of the variation in EPS was explained by these variables. Moreover, the F-statistic probability value (0.427) confirmed that the overall model lacked statistical significance at the 5% level.

In summary, while green accounting practices showed a positive direction of influence on profitability, their effects were not statistically significant in the context of Nigerian oil and gas firms. This suggests that these

practices, though important, are not yet strong predictors of profitability in this sector and may require stronger implementation, regulatory backing, or integration with broader sustainability strategies to yield measurable financial benefits.

CONCLUSION

The study set out to examine the impact of green accounting practices—measured through Audit Size (AS), Environmental Audit Reports (EAR), and Environmental Damage and Litigation (EDL)—on the profitability of oil and gas firms in Nigeria, using Earnings Per Share (EPS) as the performance indicator.

The findings revealed that while these green accounting variables showed a positive relationship with EPS, their influence was not statistically significant. This suggests that although environmental and sustainability efforts may be increasing within the sector, they have yet to translate into substantial financial performance improvements.

The lack of significant impact could be attributed to several factors, including weak enforcement of environmental regulations, poor reporting practices, or limited integration of sustainability initiatives into core business operations. Additionally, the low R-squared and high p-value from the regression analysis imply that other unexplored variables may play a more substantial role in determining profitability in the industry.

In conclusion, while green accounting is a valuable tool for promoting sustainable development and environmental responsibility, its current application in the Nigerian oil and gas sector does not significantly influence firm profitability. Stronger policy implementation, transparency, and organizational commitment are needed to align environmental initiatives with financial performance goals.

RECOMMENDATIONS

Based on the findings and conclusion of this study, the following recommendations are made to improve the integration and effectiveness of green accounting practices in enhancing the profitability of oil and gas firms in Nigeria:

1. **Strengthen Environmental Reporting Standards:** Regulatory bodies such as the Financial Reporting Council of Nigeria (FRCN) and the Nigerian Stock Exchange should enforce standardized and mandatory disclosure of environmental and sustainability activities in annual reports to enhance transparency and comparability.
2. **Institutionalize Independent Environmental Audits:** Firms should engage qualified external auditors to conduct regular and independent environmental audits. This will ensure objectivity in environmental performance evaluation and build investor confidence.
3. **Enhance Capacity of Audit Committees:** Companies should expand the role and capacity of their audit committees to include oversight of environmental and sustainability issues. This can be achieved by including members with expertise in environmental science and sustainable development.
4. **Integrate Sustainability into Corporate Strategy:** Management of oil and gas firms should not view green accounting as a compliance requirement but as a strategic tool for long-term profitability. Environmental initiatives should be aligned with business goals to ensure measurable financial benefits.
5. **Incentivize Environmental Performance:** Government and industry regulators should create tax incentives or recognition schemes for companies that demonstrate strong commitment to sustainability and green practices.
6. **Capacity Building and Awareness:** There is a need for continuous training and awareness programs for key stakeholders—especially finance and sustainability officers—on the value and methodology of green accounting.
7. **Policy and Legal Reforms:** The Nigerian government should update existing environmental laws and introduce stricter penalties for environmental violations to encourage more responsible corporate behavior and reduce litigation costs.

REFERENCE

1. Adhikari, S., Sopin, J., Techato, K. A., & Mudbhari, B. K. (2023). A Systematic Review on investment risks in hydropower to developing sustainable renewable energy systems. *International Journal of Energy Economics and Policy*, 13(2), 222-230.
2. Agbo, B.O., Ohaegbu, O.K., & Akubulo, F. (2017). The effect of environmental cost on financial performance of Nigerian brewery. *European Journal of Business and Management*, 9(17), 59-64.
3. Akinbami A. O. and Adegbulugbe J. F. K. (1998). Exploration of Energy Resources and Environmental
4. Amahalu, N. N., Ezenwaka, F. A., Obi, J. C., & Okudo, C. L. (2022). Effect of treasury single account on accountability in Nigeria public sector. *International Journal of Management Studies and Social Science Research*, 4(5), 66-76.
5. Amahalu, N. N., Okoye, P. V., Obi, J. C., & Iliemena, R. O. (2019). Effect of board diversity on financial performance of quoted natural resources firms in Nigeria. *Journal of Global Accounting*, 6(2), 36-56.
6. Amahalu, N.N., Ezechukwu, B. O., & Obi, J.C. (2017). Corporate social responsibility and financial performance of quoted deposit money banks in Nigeria. *Asian Journal of Science and Technology*, 08(12), 7183-7191.
7. Arshad, M.U., Hassan, S., & Yasir, S. (2023). Exacerbating Gender Inequalities amidst Climate Change: A Comprehensive Exploration of Vulnerabilities, Coping Strategies, and Resource Dynamics. *Journal of Humanities, Health and Social Sciences*, 1(1), 35-50.
8. Astuti, E. D. (2023). Analysis Of The Influence Of Exports, Exchange, Inflation And Tax Revenue On Indonesia's Economic Growth For The 2012-2021 Period. *International Journal of Multidisciplinary Research and Literature*, 2(4), 525-531.
9. Berenger, M., Cardona, M., & Evain, J. (2020). Integrating climate-related risks into banks' capital requirements....
10. Budiono, S., & Dura, J. (2021). The effect of green accounting implementation on profitability in companies compass index 100. *International Journal of Educational Research & Social Sciences*, 2(6), 1526-1534.
11. Chasbiandani, T., Rizal, N., & Indra Satria, I. (2019). Penerapan Green Accounting Terhadap Profitabilitas Perusahaan Di Indonesia. *AFRE (Accounting and Financial Review)*, 2(2), 126-132. <https://doi.org/10.26905/afr.v2i2.3722>
12. Cho, C. H., & Patten, D. M. (2013). Green accounting: Reflections from a CSR and environmental disclosure perspective. *Critical Perspectives on accounting*, 24(6), 443-447.
13. Degradation in Nigeria. A paper Presentation at the Two-Day National Seminar on the Management of Nigerian Resources for National Development under Auspices of NIIA and Sons Inc., New York.
14. Erlangga, H., Sos, S., & Erlangga, H. (2021). The effect of organizational commitment and work environment on job satisfaction and teachers performance. *Turkish Journal of Computer and Mathematics Education*, 12(7), 109-117.
15. Fang, M., K. S. Tan, and T. S. Wirjanto. 2019. Sustainable Portfolio Management under Climate Change. *Journal of Sustainable Finance & Investment* 9(1): 45-67. <https://doi.org/10.1080/20430795.2018.1522583>.
16. Fekete, H., Kuramochi, T., Roelfsema, M., den Elzen, M., Forsell, N., Höhne, N., ... & Gusti, M. (2021). A review of successful climate change mitigation policies in major emitting economies and the potential of global replication. *Renewable and Sustainable Energy Reviews*, 137, 110602.
17. Hallegatte, S. and Dumas, P. (2009), "Can natural disasters have positive consequences? Investigating the role of embodied technical change", *Ecological Economics*, 68(3), 777-786.
18. Johnson-Rokosu, S. F., & Olanrewaju, R. A. (2016). Corporate Sustainability Reporting Practice In An Emerging Market: A Case Of Listed Companies In Nigeria. *Knowledge Horizons/Orizonturi Ale Cunoasterii*, 8(2).
19. Khan, M. A., & Ghouri, A. M. (2011). Environmental pollution: Its effects on life and its remedies. *Researcher World: Journal of Arts, Science & Commerce*, 2(2), 276-285.
20. Lako, A. (2018). *Green Accounting, Issues, Theories, and Applications*. Jakarta: Salemba Empat.
21. Magnaghi, E., & Aprile, R. (2014). Integrated reporting: A theoretical perspective on this critical issue. *Journal of Business and Economics*, 5(8), 1320-1337.

22. Mihaylova, I., and A. Blumer. 2022. Analytical Approaches for the Climate-Related Risk Estimation of Commercial Banks' Credit Activities: Challenges, Opportunities, and the Way Ahead. *Journal of Sustainable Finance & Investment* 1–5. <https://doi.org/10.1080/20430795.2019.1704160>.
23. Moyo, M., and Wingard, H. C. 2015. An assessment of the impact of climate change on the financial performance of South African companies. *Journal of Governance and Regulation* 4(2-1): 49–62. https://doi.org/10.22495/jgr_v4_i2_p5.
24. Mungai, E. M., Ndiritu, S. W., & Da Silva, I. (2022). Unlocking climate finance potential and policy barriers—A case of renewable energy and energy efficiency in Sub-Saharan Africa. *Resources, Environment and Sustainability*, 7, 100043.
25. Nawaz, S. (2021). Energy poverty, climate shocks, and health deprivations. *Energy Economics*, 100, 105338.
26. Ndulue, G. C., Okoye, P. V., & Amahalu, N. N. (2021). Earnings management and shareholders wealth creation of quoted conglomerates in Nigeria. *Journal of Research in Education and Sustainable Development*, 1(9), 47-65.
27. Nkwoji, N. (2021). Environmental accounting and profitability of selected quoted oil and gas companies in Nigeria (2012-2017). *Journal of Accounting and Financial Management*, 7(3), 22-39.
28. Nwaiwu, N.J., & Oluka, N.O. (2018). Environmental cost disclosure and financial performance of oil and gas in Nigeria. *International Journal of Advanced Academic Research*, 4(2), 1-23.
29. Ochotorena, F. R. (2017). Green accounting: Integrating environmental impact to financial reporting framework. *Devotio: Journal of Business and Economic Studies*, 11(1), 43-54.
30. Okafor, T.G. (2018). Environmental costs accounting and reporting on firm financial performance: A survey of quoted Nigerian oil companies. *International Journal of Finance and Accounting*, 7(1), 1-6.
31. Okudo, Adaobi Geraldine, and A. N. Ndubuisi. "Corporate governance and carbon disclosure practices of quoted manufacturing firms in Nigeria." *International Journal of Contemporary Research and Review* 12, no. 07 (2021): 20420-20433.
32. Palmer, K., Oates, W. E., & Portney, P. R. (1995). Tightening environmental standards: the benefit-cost or the no-cost paradigm?. *Journal of economic perspectives*, 9(4), 119-132.
33. Panda, A. (2023). Transformative finance for climate-resilient development. *Current Opinion in Environmental Sustainability*, 64, 101327.
34. Pauw, I. (2021). Envisioning futures in school geography.
35. Porter, M. E., & Linde, C. V. D. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of economic perspectives*, 9(4), 97-118.
36. Rewadikar, B. H. A. W. A. N. A. (2014). Advantages of implementing green accounting. *Indian Research Journal*, 1(2), 1-7.
37. Roy, S., & Mathur, P. (2021). Delineating the mechanisms of elevated CO₂ mediated growth, stress tolerance and phytohormonal regulation in plants. *Plant Cell Reports*, 40(8), 1345-1365.
38. Schoenefeld, J. J. (2021). The European Green Deal: What prospects for governing climate change with policy monitoring?. *Politics and Governance*, 9(3), 370-379.
39. Shrivastava, P., & Hart, S. (1995). Creating sustainable corporations. *Business strategy and the environment*, 4(3), 154-165.
40. Sun, Y., Y. Yang, N. Huang, and X. Zou. 2020. The Impacts of Climate Change Risks on Financial Performance of Mining Industry: Evidence from Listed Companies in China. *Resources Policy* 69: 101828. <https://doi.org/10.1016/j.resourpol.2020.101828>.
41. Uwaegbulam C. (2011). Financial reporting in Nigeria and International Financial Reporting Standards. *The Guardians Newspaper*, November, 2009, Page 96.
42. Uwuigbe, U., & Jimoh, J. (2012). Corporate environmental disclosures in the Nigerian manufacturing industry: A study of selected firms. *African Research Review*, 6(3), 71-83.
43. Xiaolong, T., Gull, N., Iqbal, S., Asghar, M., Nawaz, A., Albasher, G., ... & Maqsoom, A. (2021). Exploring and validating the effects of mega projects on infrastructure development influencing sustainable environment and project management. *Frontiers in Psychology*, 12, 663199.